	Type	L #	Hits	Search Text	DBs
1	BRS	L1	3684	(electroactive or electroconductive) with polymer	US-PGPUB; USPAT
2	BRS	L2	343	1 and hydrogen with peroxide	US-PGPUB; USPAT
3	BRS	L3	117	1 and hydrogen with peroxide same (sens$9 or detect$9 or monitor$9 or measur$9)	US-PGPUB; USPAT
4	BRS	L4	50	2 and polyacetylene	US-PGPUB; USPAT
5	BRS	L5	11	3 and polyacetylene	US-PGPUB; USPAT

```
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 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  DEC 23   New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/
                   USPAT2
 NEWS  4  JAN 13   IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
 NEWS  5  JAN 13   New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
                   INPADOC
 NEWS  6  JAN 17   Pre-1988 INPI data added to MARPAT
 NEWS  7  JAN 17   IPC 8 in the WPI family of databases including WPIFV
 NEWS  8  JAN 30   Saved answer limit increased
 NEWS  9  FEB 21   STN AnaVist, Version 1.1, lets you share your STN AnaVist
                   visualization results
 NEWS 10  FEB 22   The IPC thesaurus added to additional patent databases on STN
 NEWS 11  FEB 22   Updates in EPFULL; IPC 8 enhancements added
 NEWS 12  FEB 27   New STN AnaVist pricing effective March 1, 2006
 NEWS 13  FEB 28   MEDLINE/LMEDLINE reload improves functionality
 NEWS 14  FEB 28   TOXCENTER reloaded with enhancements
 NEWS 15  FEB 28   REGISTRY/ZREGISTRY enhanced with more experimental spectral
                   property data
 NEWS 16  MAR 01   INSPEC reloaded and enhanced
 NEWS 17  MAR 03   Updates in PATDPA; addition of IPC 8 data without attributes
 NEWS 18  MAR 08   X.25 communication option no longer available after June 2006
 NEWS 19  MAR 22   EMBASE is now updated on a daily basis
 NEWS 20  APR 03   New IPC 8 fields and IPC thesaurus added to PATDPAFULL
 NEWS 21  APR 03   Bibliographic data updates resume; new IPC 8 fields and IPC
                   thesaurus added in PCTFULL
 NEWS 22  APR 04   STN AnaVist $500 visualization usage credit offered
 NEWS 23  APR 12   LINSPEC, learning database for INSPEC, reloaded and enhanced
 NEWS 24  APR 12   Improved structure highlighting in FQHIT and QHIT display
                   in MARPAT
 NEWS 25  APR 12   Derwent World Patents Index to be reloaded and enhanced during
                   second quarter; strategies may be affected

 NEWS EXPRESS  FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
               V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
               http://download.cas.org/express/v8.0-Discover/

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=> s (electroactive or electroconductive) (s) polymer
L1 4621 (ELECTROACTIVE OR ELECTROCONDUCTIVE) (S) POLYMER

=> s l1 and hydrogen (8w) peroxide (p) (measur? or sens? or detect? or monitor?)
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'PEROXIDE (P) '
L2 21 L1 AND HYDROGEN (8W) PEROXIDE (P) (MEASUR? OR SENS? OR DETECT? OR MONITOR?)

=> s l2 and polyacetylene
L3 3 L2 AND POLYACETYLENE

=> display l2 1-21 ibib abs

L2 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:172084 CAPLUS
DOCUMENT NUMBER: 142:406214
TITLE: Electrostatic Adsorption of Heme Proteins Alternated with Polyamidoamine Dendrimers for Layer-by-layer Assembly of Electroactive Films
AUTHOR(S): Shen, Li; Hu, Naifei
CORPORATE SOURCE: Department of Chemistry, Beijing Normal University,

Beijing, 100875, Peop. Rep. China
SOURCE: Biomacromolecules (2005), 6(3), 1475-1483
CODEN: BOMAF6; ISSN: 1525-7797
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A novel thin film of heme proteins, including Hb, myoglobin (Mb), and catalase (Cat), was successfully assembled layer by layer with polyamidoamine (PAMAM) dendrimers on different solid surfaces. At pH 7.0, protonated PAMAM possesses pos. surface charges, whereas the proteins have net neg. surface charges at pH above their isoelec. points. Thus, layer-by-layer {PAMAM/protein}n films were assembled with alternate adsorption of oppositely charged PAMAM and proteins from their aqueous solns. mainly by electrostatic interaction. The assembly process was **monitored** by quartz crystal microbalance (QCM), UV-vis spectroscopy, and cyclic voltammetry (CV). The growth of the protein multilayer films was regular and linear, whereas the electroactivity of the films was only extended to a few bilayers. CVs of {PAMAM/protein}n films showed a pair of well-defined and nearly reversible peaks characteristic of the protein heme Fe(III)/Fe(II) redox couples. Although {PAMAM/Hb}n and {PAMAM/Mb}n films showed very similar properties, {PAMAM/Cat}n films displayed different and unique characters. The substrates with biol. or environmental significance, such as oxygen, **hydrogen peroxide**, trichloroacetic acid, and nitrite, were catalytically reduced at {PAMAM/protein}n film electrodes, showing the potential applicability of the films as new types of biosensors or bioreactors based on direct electrochem. of the proteins. Both the electrochem. and electrocatalytic activity of {PAMAM/protein}n films can be tailored precisely by controlling the number of bilayers or the film thickness.

REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:777 CAPLUS
DOCUMENT NUMBER: 142:68110
TITLE: Sensor for sensing a chemical component concentration using an electroactive material
INVENTOR(S): Centanni, Michael A.
PATENT ASSIGNEE(S): Steris Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004262170	A1	20041230	US 2003-608276	20030627
WO 2005001425	A2	20050106	WO 2004-US18959	20040615
WO 2005001425	A3	20050728		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2005186116	A1	20050825	US 2005-116574	20050428

PRIORITY APPLN. INFO.: US 2003-608276 A 20030627

AB An **electroactive** material (e.g., a doped **electroactive polymer**, or an intercalated carbon/graphite fiber) responsive to the concentration of a chemical component is used to sense the concentration of the chemical component inside a chamber. The conductivity, or other elec. property of the electroactive material, varies in response to the exposure to the chemical component.

L2 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:511583 CAPLUS
DOCUMENT NUMBER: 139:65706
TITLE: Electrode for active oxygen species, and sensor using the electrode
INVENTOR(S): Yuasa, Makoto; Abe, Masahiko; Yamaguchi, Aritomo; Shiozawa, Asako; Ishikawa, Masuhide; Eguchi, Katsuya; Kido, Shigeru
PATENT ASSIGNEE(S): Takebayashi, Hitoshi, Japan
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003054536	A1	20030703	WO 2002-JP13287	20021219
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002357608	A1	20030709	AU 2002-357608	20021219
EP 1457773	A1	20040915	EP 2002-805479	20021219
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1605026	A	20050406	CN 2002-825411	20021219
US 2005077192	A1	20050414	US 2003-498359	20021219

PRIORITY APPLN. INFO.: JP 2001-387899 A 20011220
WO 2002-JP13287 W 20021219

AB An electrode for active oxygen species is disclosed, which characteristically comprises a **polymer** film of a metal porphyrin complex formed on an **electroconductive** member. This electrode for active oxygen species is capable of **detecting** under either circumstance, in vivo or in vitro, active oxygen species such as superoxide anion radical, **hydrogen peroxide**, or hydroxyl radical (•OH), and other radical active species (e.g., NO, ONOO-), and thereby, can be used for specifying various diseases and for examining the presence of active oxygen species in a food sample or a water sample such as tap water and sewage. Diagrams describing the electrode and **sensor** assembly are given.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:173896 CAPLUS
DOCUMENT NUMBER: 138:207014
TITLE: Methods for producing highly sensitive potentiometric

sensors
INVENTOR(S): Purvis, Duncan Ross; Leonardova, Olga; Farmakovski, Dmitri Alexandrovich; Tcherkassov, Vladimir Rurikovich
PATENT ASSIGNEE(S): Sensor-Tech Limited, UK
SOURCE: PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003019171	A1	20030306	WO 2002-GB3894	20020823
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2456352	AA	20030306	CA 2002-2456352	20020823
EP 1423688	A1	20040602	EP 2002-755236	20020823
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005501254	T2	20050113	JP 2003-523987	20020823
US 2004182719	A1	20040923	US 2004-486840	20040223

PRIORITY APPLN. INFO.:	GB 2001-20674	A	20010824
	GB 2002-2151	A	20020130
	WO 2002-GB3894	W	20020823

AB The invention relates to methods of preparation of highly sensitive, reproducible, long-term stable potentiometric sensors with an **electroconductive polymer** film as a sensing element. The sensors are suitable for medical, biotech., agricultural, and ecol. uses, as well as environmental monitory and food quality assurance, particularly lab testing of biol and environmental fluids performed for the purpose of clin. diagnostics, proteomics, cell anal., environmental and manufacturing monitoring and research.
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:102023 CAPLUS
DOCUMENT NUMBER: 132:204965
TITLE: Fabrication of an ultramicrosensor for measurement of extracellular myocardial superoxide
AUTHOR(S): Xue, Jian; Xian, Yuezhong; Ying, Xiangyang; Chen, Junshui; Wang, Lin; Jin, Litong
CORPORATE SOURCE: School of Chemistry & Life Science, East China Normal University, Shanghai, 200062, Peop. Rep. China
SOURCE: Analytica Chimica Acta (2000), 405(1-2), 77-85
CODEN: ACACAM; ISSN: 0003-2670
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel superoxide (O2-) ultramicrosensor based on copper/platinum microparticles and electropolymd. pyrrole was fabricated for the **measurement** of extracellular myocardial superoxide. The Cu/Pt-PPy modified ultramicrosensors were evaluated, for the first time, as superoxide **sensor**. The amperometric response to superoxide was

monitored at the potential of 0.45 V (vs. SCE) in Hank's balanced salt solution (HBSS). The **sensor** proved were proved to have a high **sensitivity**, selectivity and short response time. The **detection** limit is 24 (DL) of the **sensors** is 24 nmol/l (S/N of 3). The life period (at least 1 mo) of **sensors** is longer than that of enzyme electrodes. The potential interference from some endogenous **electroactive** substances in biol. tissues, such as **hydrogen peroxide** (H2O2), uric acid (UA), neurotransmitters and their metabolites, at the concns. higher than those in biol. systems, could be eliminated by further coating the Cu/Pt modified electrode with a **polymer** film. The method was applied to the **measurement** of superoxide production in a biol. relevant model system and in rat myocardial cells (MCs).

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:415873 CAPLUS
DOCUMENT NUMBER: 131:77996
TITLE: A disposable immunomagnetic electrochemical sensor for the 2,4-dichlorophenoxyacetic acid herbicide
AUTHOR(S): Limoges, B.; Martre, A. M.; Dequaire, M.; Schollhorn, B.; Degrand, C.
CORPORATE SOURCE: Electrosynthese et Electroanalyse Bioorganique, UMR CNRS 6504, Universite Blaise Pascal de Clermont-Ferrand, Aubiere, 63177, Fr.
SOURCE: Proceedings - Electrochemical Society (1999), 99-5(New Directions in Electroanalytical Chemistry II), 157-167
CODEN: PESODO; ISSN: 0161-6374
PUBLISHER: Electrochemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The competitive enzyme immunoassay of the 2,4-D was achieved with a **detection** limit <0.01 ppb by combining the convenient use of immunomagnetic beads with the **sensitive** determination of horseradish peroxidase (HRP) at a Nafion-modified screen-printed electrode (Nafion-SPE). The entire assay took place in a microwell-shaped electrochem. cell. The competitive immunoreaction (30 min) between the analyte and the HRP-analyte conjugate for a limited amount of antibodies-coated magnetic beads was followed by a magnetic separation and a washing step. During the enzyme reaction (30 min), the beads were magnetically localized on the Nafion-SPE, and the **electroactive** cationic product of the reaction between 4-aminoantipyrine and 2-(N-ethyl-m-toluidino)ethanol in the presence of **hydrogen peroxide**, was thus immediately entrapped by the anionic **polymer** film. The electrochem. assay was .apprx.70-fold more **sensitive** than in the case of a com. kit assay (colorimetric **detection**), and it involved 5-fold lower amts. of immunoreagents.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:629721 CAPLUS
DOCUMENT NUMBER: 129:257355
TITLE: Gravure coating systems and magnetic particle-coated antibodies in electrochemical sensors
INVENTOR(S): Cabelli, Michael D.
PATENT ASSIGNEE(S): Ohmicron Medical Diagnostics, Inc., USA
SOURCE: U.S., 39 pp., Cont.-in-part of U. S. Ser. 372,515, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5814376	A	19980929	US 1995-488133	19950607
WO 9621521	A1	19960718	WO 1996-US308	19960111

W: CA, JP
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.:	US 1995-372515	B2	19950113
	US 1995-488133	A	19950607
	US 1995-514765	A	19950814

AB An aspect of this invention is a continuous gravure coating process for forming a film of **electroconductive polymer** on the surface of a solid substrate. This process consists of (1) creating a solution comprising an **electroconductive polymer** dissolved in an organic solvent, (2) absorbing said solution directly onto the gravure surface of a cylinder, (3) transferring said solution from the gravure surface of the cylinder to a substrate surface, and (4) evaporating the organic solvent from the solution transferred to the substrate surface so as to leave a film of the **electroconductive polymer** on the substrate surface. An addnl. aspect of the invention involves **detecting** the presence of a specific analyte in a sample using an assay format in which magnetic components, such as magnetic particles with antibodies on their surfaces, provide an analyte-binding solid phase and the signal is generated by a dopant that changes the conductivity of an **electroconductive polymer** coating on an electrode. A related aspect of the invention is the use of a magnetic device comprised of an array of magnetic pole-pieces of high relative permeability alternating with appropriately oriented magnetic structural elements to provide a focussed magnetic field that will attract the magnetic components used in an assay to the surface of a receptacle, such as an electroconductive cell. The invention is illustrated by analyzing atrazine and using cacodylate to generate a triiodide dopant from **hydrogen peroxide**.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 8 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:524256 CAPLUS
DOCUMENT NUMBER: 125:162737
TITLE: Method for making electrochemical sensors and biosensors having a polymer modified surface
INVENTOR(S): Yacynych, Alexander
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 41 pp., Cont.-in-part of U.S. 5,286,364.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5540828	A	19960730	US 1994-196838	19940215
US 5286364	A	19940215	US 1991-677384	19910329

PRIORITY APPLN. INFO.:	US 1987-59706	B1	19870608
	US 1989-456075	B1	19891220
	US 1991-677384	A2	19910329

AB A method for making a sensing element for use in a sensor or biosensor that amperometrically measures the concentration of an analyte in a liquid, includes the following sequential steps: (a) obtaining an electrode; (b) immersing the electrode in a solution of monomer that is capable of being electropolymd. into an elec. insulating **polymer**; (c) flowing an elec. current from a cathode through the solution to the electrode at a

voltage and amperage sufficient to cause the monomer to polymerize on the surface of the electrode, thereby yielding an electrode coated with an adherent layer of elec. insulating **polymer**; and (d) impregnating the polymeric coating on the surface with a sensing agent that is capable, when contacted by a specific analyte in a chemical or biol. liquid, of generating an **electroactive** mol. that can be detected amperometrically.

L2 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:736060 CAPLUS
DOCUMENT NUMBER: 123:192783
TITLE: A conductimetric H2O2 sensitive **electroconductive polymer** transducer for development of oxidoreductase enzyme biosensors and oxidoreductase labeled immunosensors
AUTHOR(S): Guiseppi-Elie, A.; Wilson, A. M.; Linden, C. L.; Pearce, F. J.; Wiesmann, W. P.; Glick, D. L.
CORPORATE SOURCE: AAI-ABTECH, Yardley, PA, 19067, USA
SOURCE: Polymeric Materials Science and Engineering (1994), 71, 651-3
CODEN: PMSEDG; ISSN: 0743-0515
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A PPy-based conductimetric transducer that is sensitive to H2O2 can readily and reliably determine H2O2 over the range 100 μM - 600 μM. These transducers are readily fabricated using available interdigitated microsensor electrode and electropolymd. polypyrrole thin film.

L2 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:672392 CAPLUS
DOCUMENT NUMBER: 123:309646
TITLE: **Electroconductive polymer** thin films with internal bioactive moieties for biosensor applications
AUTHOR(S): Guiseppi-Elie, A.; Wilson, A. M.
CORPORATE SOURCE: Research and Development Department, AAI-ABTECH, Yardley, PA, 19067, USA
SOURCE: Polymeric Materials Science and Engineering (1995), 72, 404-5
CODEN: PMSEDG; ISSN: 0743-0515
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A general purpose H2O2-sensitive, conductometric transducer makes it possible to develop a wide range of oxidoreductase enzyme biosensors such as those based on glucose oxidase. A polypyrrole-based, conductometric biotransducer that is sensitive to H2O2 can be configured into an immunosensor by conferring the transducer with the specificity of biotin and exploiting strong biotin-streptavidin binding in various bioassays. Methods and apparatus are discussed for the development of biospecific oxidoreductase enzyme biosensors and for the fabrication of oxidoreductase-labeled immunosensors.

L2 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:289382 CAPLUS
DOCUMENT NUMBER: 122:50369
TITLE: A biosensor for L-amino acids using polytyramine for enzyme immobilization
AUTHOR(S): Copper, Julia C.; Schubert, Florian
CORPORATE SOURCE: Physikalisch-Technische Bundesanstalt, Berlin, D-10587, Germany
SOURCE: Electroanalysis (1994), 6(11/12), 957-61
CODEN: ELANEU; ISSN: 1040-0397

PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Electrodeposition of polytyramine is demonstrated to be a simple and convenient procedure for electrode modification, generating amine groups to which L-amino acid oxidase can be covalently bound. An L-amino acid oxidase (L-AAOD)-polytyramine electrode can be used for **detection** of L-amino acids, via the current due to oxidation of enzymically produced **hydrogen peroxide**. The calibration graph of the **sensor** for phenylalanine is linear up to 1.4 mM with a lower limit of **detection** of 0.07 mM. The useful **measuring** range for leucin is between 0.07 and 3 mM. The enzyme-polytyramine electrodes are stable for more than 1 mo. The **polymer** coating affords some protection of the electrode from direct (nonenzymic) oxidation of **electroactive** amino acids, which may otherwise cause electrode fouling, although at present, the **polymer** selectivity is insufficient to prevent errors in estimation of analyte concentration

L2 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:265292 CAPLUS
DOCUMENT NUMBER: 120:265292
TITLE: Electrochemical biosensor with electrically insulating polymer-modified sensing surface
INVENTOR(S): Yacynych, Alexander M.; Piznik, Sylvia S.; Reynolds, Eugene R.; Geise, Robert J.
PATENT ASSIGNEE(S): Rutgers University, USA
SOURCE: U.S., 38 pp. Cont.-in-part of U.S. Ser. No. 456,075.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5286364	A	19940215	US 1991-677384	19910329
US 5540828	A	19960730	US 1994-196838	19940215
PRIORITY APPLN. INFO.:			US 1987-59706	B1 19870608
			US 1989-456075	A2 19891220
			US 1991-677384	A2 19910329

AB An electrode for a biosensor (e.g. a glucose biosensor) having a layer of an elec. insulating polymer formed in situ on its operating surface by electropolymn is disclosed. E.g., a diaminobenzene and a dihydroxybenzene (such as 1,3-diaminobenzene and resorcinol, resp.) are copolymd. on the electrode's surface by immersing the electrode in a circulating dilute solution of the monomers in deaerated phosphate buffer, and applying a small, continuously cycling voltage between that electrode and another electrode (e.g. 0.00 - 0.80 V) until current flow between the electrodes decreases to a min. Because the polymer is elec. insulating, polymerization ceases while the polymer layer is still very thin (e.g. 10 nm). An analyte-**sensing** agent, e.g. immobilized glucose oxidase, is imbedded in the polymer, but with a number of its analyte recognition sites unblocked. The **polymer** layer shields the electrode surface from interferences and fouling agents such as uric acid and proteins, but it is sufficiently porous to permit smaller **electroactive** mols. (e.g. **hydrogen peroxide**), generated through contact of the enzyme with the analyte mols., to diffuse through to the electrode surface. Preferably, a ferrocene compound (e.g. α-hydroxyethylferrocene or 1,1'-dimethylferrocene), which functions as an electron mediator, is applied to the polymer film and held there by adsorption. Determination of glucose in blood serum using an immobilized enzyme biosensor of the invention is described.

L2 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:72611 CAPLUS
DOCUMENT NUMBER: 120:72611
TITLE: A glucose sensor based on poly-1,2-diaminobenzene-modified platinized glassy carbon electrode
AUTHOR(S): Ji, Xuefeng; Zhang, Yonghua
CORPORATE SOURCE: Changchun Inst. Appl. Chem., Chin. Acad. Sci., Changchun, 130022, Peop. Rep. China
SOURCE: Yingyong Huaxue (1993), 10(2), 97-8
CODEN: YIHUED; ISSN: 1000-0518
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB A platinized glassy carbon electrode (GCE), electropolymd. with 1,2-diaminobenzene and immobilized with glucose oxidase (GODx), is used in the construction of a **sensor** for the determination of glucose. The platinum coating provides an increased current response to the oxidation of **hydrogen peroxide** as compared with a bare GCE. The permselectivity of 1,2-diaminobenzene **polymer** can drastically reduce the effects of **electroactive** interferents, such as ascorbic acid and uric acid, and prevent high mol. weight species from fouling on the electrode surface. The **sensor** retains the advantages of conventional GODX electrode such as high response, wide linear range, fast response and has high selectivity and reproducibility.

L2 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1993:490387 CAPLUS
DOCUMENT NUMBER: 119:90387
TITLE: Selectivity of conducting polymer electrodes and their application in flow injection analysis of amino acids
AUTHOR(S): Cooper, J. C.; Haemmerle, M.; Schuhmann, W.; Schmidt, H. L.
CORPORATE SOURCE: Lehrstuhl Allg. Chem. Biochem., Tech. Univ. Munchen, Freising-Weihenstephan, (W)-8050, Germany
SOURCE: Biosensors & Bioelectronics (1993), 8(1), 65-74
CODEN: BBIOE4; ISSN: 0956-5663
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The size-exclusion properties of conducting polymer modified electrodes depend on the polymer morphol. and thickness. By controlling the polymerization conditions, polymer modified electrodes can be produced that prevent access of certain small redox mols. to the electrode surface, whilst permitting oxidation of anal. relevant **hydrogen peroxide** to take place. Such polymer electrodes find application in amperometric **detection** of amino acids. Certain amino acids are electroactive and are oxidized directly on the electrode surface at the potential required for **measurements**. Polymer modification of the electrode enables direct amino acid oxidation, and associated electrode fouling effects, to be suppressed. The size exclusion properties of polyaniline and polypyrrole were compared by investigating oxidation of **hydrogen peroxide** and **electroactive** amino acids at such **polymer** modified electrodes. Polyaniline was found to be more effective than polypyrrole at suppressing direct amino acid oxidation A polyaniline electrode, which permitted oxidation of **hydrogen peroxide** but prevented direct amino acid oxidation, was used together with L-amino acid oxidase immobilized on an enzyme column for **measurement** of electroactive amino acids. Whereas the response at a bare platinum electrode decreased significantly during the **measurement**, the response of a 700 mC cm-2 polyaniline electrode remained almost constant, indicating that electrode fouling was practically eliminated.

L2 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1993:404433 CAPLUS

DOCUMENT NUMBER: 119:4433
TITLE: Analytical method for chemical and biosensor devices formed from **electroactive polymer** thin films
INVENTOR(S): Guiseppi-Elie, Anthony
PATENT ASSIGNEE(S): Allage Associates, Inc., USA
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9306237	A1	19930401	WO 1992-US7784	19920914
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
US 5312762	A	19940517	US 1991-760450	19910913
PRIORITY APPLN. INFO.:			US 1991-760450 A	19910913
			US 1989-322670 B2	19890313

AB An anal. methodol. is disclosed for the interrogation, capture, and anal. of the chemical and biosensor responses of chemoresistive chemical and biosensor devices based on chemical modified and derivatized **electroactive polymer** films. The principle of operation and the details of performance of this anal. method, when applied to chemical and biosensor devices based on electroactive polyaniline and polypyrrole, are also disclosed. Several chemoresistive chemical and biosensor devices based on electroactive polypyrrole and polyaniline are similarly disclosed. Chemoresistive chemical and biosensor devices are described in which transducer-active polyaniline and polypyrrole films are fabricated on Interdigitated Microsensor Electrode (IME) devices. Biospecific chemoresistive response for a glucose biosensor using electroactive polypyrrole and glucose oxidase is described; a calibration plot for 0.1-20.0 mg glucose/mL is included.

L2 ANSWER 16 OF 21 COMPENDEX COPYRIGHT 2006 EEI on STN
ACCESSION NUMBER: 2005(38):9265 COMPENDEX
TITLE: Layer-by-layer self-assembled multilayer films of carbon nanotubes and platinum nanoparticles with polyelectrolyte for the fabrication of biosensors.
AUTHOR: Yang, Minghui (Chemistry and Chemical Engineering College State Key Laboratory of Chemo/Biosensing and Chemometrics Hunan University, Hunan, Changsha 410082, China); Yang, Yu; Yang, Haifeng; Shen, Guoli; Yu, Ruqin
SOURCE: Biomaterials v 27 n 2 January 2006 2006.p 246-255
CODEN: BIMADU ISSN: 0142-9612
PUBLICATION YEAR: 2006
DOCUMENT TYPE: Journal
TREATMENT CODE: Experimental
LANGUAGE: English
AN 2005(38):9265 COMPENDEX
AB Platinum nanoparticle-doped chitosan (CHIT) solution can be easily prepared by treating the CHIT solution with aqueous H2PtCl6 solution followed by chemical reduction of Pt(IV) with NaBH4. Multiwalled carbon nanotubes (MWCNT) are then dispersed in the nanoparticle-doped solution. The resulting Pt-CNT-CHIT material brings new capabilities for electrochemical devices by using the synergistic action of Pt nanaoparticles and CNT. Positively charged Pt-CNT-CHIT solution and negatively charged poly(sodium-p-styrenesulfonate) salt (PSS) have been employed to fabricate stable ultrathin multilayer films on gold electrode and quartz glass slides in a layer-by-layer fashion. Cyclic voltammetric

and UV-vis adsorption spectroscopy confirms the consecutive growth of the multilayer films. The modified gold electrode allows low-potential **detection** of **hydrogen peroxide** with high **sensitivity** and fast response time. With the immobilization of cholesterol oxidase onto the electrode surface using glutaric dialdehyde, a biosensor that responds **sensitively** to cholesterol has been constructed. In pH 6.98 phosphate buffer, almost interference free determination of cholesterol has been realized at 0.1 V vs. SCE with a linear range from 0.01 to 3 mM and response time<30 s. With the immobilization of another cholesterol esterase enzyme layer, the biosensor was used to determine total cholesterol in serum samples with satisfactory results. $CPY 2005 Elsevier Ltd. All rights reserved. 31 Refs.

L2 ANSWER 17 OF 21 COMPENDEX COPYRIGHT 2006 EEI on STN
ACCESSION NUMBER: 2005(22):4025 COMPENDEX
TITLE: Electroanalytical chemistry with carbon film electrodes and micro and nano-structured carbon film-based electrodes.
AUTHOR: Niwa, Osamu (National Institute of Advanced Industrial Science and Technology Central 6, Tsukuba, Ibaraki 305-8566, Japan)
SOURCE: Bulletin of the Chemical Society of Japan v 78 n 4 Apr 15 2005 2005.p 555-571
CODEN: BCSJA8 ISSN: 0009-2673
PUBLICATION YEAR: 2005
DOCUMENT TYPE: Journal
TREATMENT CODE: Experimental
LANGUAGE: English
AN 2005(22):4025 COMPENDEX
AB The recent development of electroanalysis using carbon film electrodes and micro and nano-structured carbon film based electrodes is reviewed. Graphite-like carbon film was synthesized by various methods such as thermal chemical vapor deposition and the thermolysis of organic **polymers**. Highly stable diamond film electrodes with a wide potential window have been synthesized by using the plasma CVD process and then employed for electroanalysis. A carbon film consisting of electron cyclotron resonance (ECR) sputter-deposited carbon films containing a large portion of sp3 bonds was introduced. The film makes it possible to **detect** analytes with higher oxidation potential or **electroactive** species that foul the electrode surface after oxidation. ECR carbon film can be deposited at low temperature and is conductive without doping. Graphite-like carbon films have been formed in order to construct various microelectrodes and microarray electrodes by using photolithography and dry etching methods to meet the requirements for improving the **detection** limit and for miniaturizing electrochemical **detectors** for small volume samples. For example, carbon film fabricated into an interdigitated array (IDA) electrode has a very low **detection** limit for biochemicals such as catecholamines when used as an electrochemical **detector** for high-performance liquid chromatography (HPLC) and capillary electrophoresis (CE). In contrast, composite carbon films containing various metal nanoparticles can be used for many analytes, including **hydrogen peroxide** and sugars. The films are deposited by the RF co-sputtering of metal and carbon. This is unlike other preparation methods such as the thermolysis of a **polymer**-metal complex or the electroplating of metal particles onto carbon film. The obtained carbon film contains 2-5 nm metal particles such as Pt, Ni, Cu, and Ir. The highly **sensitive** and extremely stable **detection** of **hydrogen peroxide**, which is known to be the product of various oxidase enzymatic reactions, was achieved with sputter-deposited carbon film in which Pt nano-particles were dispersed. In contrast, carbon films containing dispersed Ni and Cu nanoparticles provide a high electrocatalytic current for sugars such as glucose and lactose in alkaline solution. By using the film as a **detection** electrode

for HPLC, one can obtain a lower **detection** limit for several sugars than when using bulk metal electrodes. $CPY 2005 The Chemical Society of Japan. 133 Refs.

L2 ANSWER 18 OF 21 COMPENDEX COPYRIGHT 2006 EEI on STN
ACCESSION NUMBER: 2000(40):3864 COMPENDEX
TITLE: Fabrication and characterization of disposable type lactate oxidase **sensors** for dairy products and clinical analysis.
AUTHOR: Patel, N.G. (Inst fuer Chemo-und Biosensorik (JCB), Muenster, Ger); Erlenkoetter, A.; Cammann, K.; Chemnitius, G.-C.
SOURCE: Sensors and Actuators, B: Chemical v 67 n 1 Aug 2000.p 134-141
CODEN: SABCEB ISSN: 0925-4005
PUBLICATION YEAR: 2000
DOCUMENT TYPE: Journal
TREATMENT CODE: Application; General Review
LANGUAGE: English
AN 2000(40):3864 COMPENDEX
AB Disposable transducers having a working electrode made of a **polymer** disk sputter-coated with platinum, a screen-printed graphite basal track and an aluminum foil as a contact pad were fabricated for the development of L-lactate oxidase biosensors.Uncoated electrodes were characterized by cyclic voltammetry. A mixture of lactate oxidase with polyethyleneimine (PEI) and poly(carbamoyl)sulphonate (PCS) hydrogel was used for enzyme immobilization onto the platinum disk of the transducers. A two-electrode configuration set up in an amperometric mode was used to **measure** the current generated due to the enzymatically generated **hydrogen peroxide**. The **sensors** capable of **sensitive** L-lactate determination were fabricated with different settings of Nafion layers to exclude **electroactive** interferents.Lactate oxidase **sensors** were characterized with respect to linear range, **sensitivity**, response time and recovery time. The effects of ascorbic acid and temperature on the **sensor** performance were investigated. The continuous operation and the stability of **sensors** were also evaluated. The performance of **sensors** coated with larger numbers of small amounts of Nafion was found to be more advantageous than that of **sensors** coated with fewer numbers of larger amounts of Nafion. The **sensors** were also tested with diluted dairy products and human whole blood and serum. Good agreement was found between the results obtained by the newly developed disposable **sensors** and other well established analytical methods.(Author abstract) 31 Refs.

L2 ANSWER 19 OF 21 COMPENDEX COPYRIGHT 2006 EEI on STN
ACCESSION NUMBER: 1997(2):2142 COMPENDEX
TITLE: Platinization of shapable **electroconductive polymer** film for an improved glucose **sensor**.
AUTHOR: Faruque Khan, Golam (Natl Univ of Singapore, Singapore, Singapore); Wernet, Wolfgang
SOURCE: Journal of the Electrochemical Society v 143 n 10 Oct 1996.p 3336-3342
CODEN: JESOAN ISSN: 0013-4651
PUBLICATION YEAR: 1996
DOCUMENT TYPE: Journal
TREATMENT CODE: Experimental
LANGUAGE: English
AN 1997(2):2142 COMPENDEX
AB This paper describes a novel electrode material for the preparation of a first generation amperometric biosensor. The material consists of a flexible conductive polymer film of polypyrrole doped with polyanions and a layer of microporous Pt black, prepared electrochemically on the polymer

film. **Sensors** fabricated with this material produce a comparatively higher H2O2 oxidation current at a lower applied potential.Glucose **sensors** were prepared by adsorbing glucose oxidase at the porous Pt black structure, covering with gelatin, and finally cross-linking with glutaraldehyde at dry condition. The developed **sensors** showed significantly improved performance over similar reported **sensor** systems. The performance of the glucose **sensor** was evaluated by a specially designed flow injection analysis (FIA) system. The **sensors** were continuously polarized at 25 degree C and glucose samples were automatically injected at 30 min intervals. The **sensors** worked at 0.3 to 0.4 V and produced a huge current response (greater than 1 mA/cm2) with a wide linear range of **detection** (0 to 100 mM). The system effectively recycles oxygen, thus, the response current was not affected by a variation of oxygen concentration of the buffer. The interference of ascorbic acid, uric acid, bilirubin, etc.(at a physiological level) produced a current within the experimental error level. The **sensor** showed an extended working and shelf life.(Author abstract) 25 Refs.

L2 ANSWER 20 OF 21 COMPENDEX COPYRIGHT 2006 EEI on STN
ACCESSION NUMBER: 1993(33):353 COMPENDEX
TITLE: Selectivity of conducting polymer electrodes and their application in flow injection analysis of amino acids.
AUTHOR: Cooper, J.C. (Technische Universitat Munchen, Germany); Hammerle, M.; Schuhmann, W.; Schmidt, H.-L.
SOURCE: Biosensors & Bioelectronics v 8 n 1 1993.p 65-74
CODEN: BBIOE4 ISSN: 0956-5663
PUBLICATION YEAR: 1993
DOCUMENT TYPE: Journal
TREATMENT CODE: Experimental; Application
LANGUAGE: English
AN 1993(33):353 COMPENDEX
AB The size-exclusion properties of conducting **polymer** modified electrodes depend on the **polymer** morphology and thickness.By controlling the polymerization conditions, **polymer** modified electrodes can be produced that prevent access of certain small redox molecules to the electrode surface, whilst permitting oxidation of analytically relevant **hydrogen peroxide** to take place. Such **polymer** electrodes find application in amperometric **detection** of amino acids.Certain amino acids are **electroactive** and are oxidized directly on the electrode surface at the potential required for **measurements**.**Polymer** modification of the electrode enables direct amino acid oxidation, and associated electrode fouling effects, to be suppressed.The size exclusion properties of polyaniline and polypyrrole were compared by investigating oxidation of **hydrogen peroxide** and **electroactive** amino acids at such **polymer** modified electrodes.Polyaniline was found to be more effective than polypyrrole at suppressing direct amino acid oxidation.A polyaniline electrode, which permitted oxidation of **hydrogen peroxide** but prevented direct amino acid oxidation, was used together with L-amino acid oxidase immobilized on an enzyme column for **measurement** of **electroactive** amino acids.Whereas the response at a bare platinum electrode decreased significantly during the **measurement**, the response of a 700 mC cm minus 2 polyaniline electrode remained almost constant, indicating that electrode fouling was practically eliminated.(Author abstract) refs.

L2 ANSWER 21 OF 21 COMPENDEX COPYRIGHT 2006 EEI on STN
ACCESSION NUMBER: 1988(3):38805 COMPENDEX
DOCUMENT NUMBER: 880320818
TITLE: SEMICONDUCTIVE POLYMER FILM **SENSOR** FOR GLUCOSE.
AUTHOR: Malmros, M.K. (Ohmicron Corp, Pennington, NJ, USA);

Glubinski, J.III; Gibbs, William B.Jr.
SOURCE: Biosensors v 3 n 2 1987 p 71-87
CODEN: BISSED ISSN: 0265-928X
PUBLICATION YEAR: 1987
DOCUMENT TYPE: Journal
TREATMENT CODE: Application; Experimental
LANGUAGE: English
AN 1988(3):38805 COMPENDEX DN 880320818
AB The electrical conductivity of organic **polymers** such as polyacetylene and its derivatives can be varied over twelve orders of magnitude with small amounts (0-3%) of various dopants, such as iodine, bromine, and perchloric acid.Semiconductive polyacetylene film doped with iodine is **sensitive** to **hydrogen peroxide**, and can be used as a quantitative **hydrogen peroxide sensor**.A rapid, quantitative **sensor** for glucose, using the flavorprotein glucose oxidase, is described and introduces a novel **electroactive** material, polyacetylene, as the basis for a new biosensor.A significant increase in the **sensitivity** of this device has been obtained by mediating the doping reaction through lactoperoxidase and potassium iodide.(Author abstract) 22 refs.

=> display l3 1-3 ibib abs

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:777 CAPLUS
DOCUMENT NUMBER: 142:68110
TITLE: Sensor for sensing a chemical component concentration using an electroactive material
INVENTOR(S): Centanni, Michael A.
PATENT ASSIGNEE(S): Steris Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004262170	A1	20041230	US 2003-608276	20030627
WO 2005001425	A2	20050106	WO 2004-US18959	20040615
WO 2005001425	A3	20050728		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2005186116	A1	20050825	US 2005-116574	20050428

PRIORITY APPLN. INFO.: US 2003-608276 A 20030627
AB An **electroactive** material (e.g., a doped **electroactive polymer**, or an intercalated carbon/graphite fiber) responsive to the concentration of a chemical component is used to sense the concentration of the chemical component inside a chamber. The conductivity, or other elec. property of the electroactive material, varies in response to the exposure to the chemical component.

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:629721 CAPLUS
DOCUMENT NUMBER: 129:257355
TITLE: Gravure coating systems and magnetic particle-coated antibodies in electrochemical sensors
INVENTOR(S): Cabelli, Michael D.
PATENT ASSIGNEE(S): Ohmicron Medical Diagnostics, Inc., USA
SOURCE: U.S., 39 pp., Cont.-in-part of U. S. Ser. 372,515, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5814376	A	19980929	US 1995-488133	19950607
WO 9621521	A1	19960718	WO 1996-US308	19960111
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.: US 1995-372515 B2 19950113
US 1995-488133 A 19950607
US 1995-514765 A 19950814

AB An aspect of this invention is a continuous gravure coating process for forming a film of **electroconductive polymer** on the surface of a solid substrate. This process consists of (1) creating a solution comprising an **electroconductive polymer** dissolved in an organic solvent, (2) absorbing said solution directly onto the gravure surface of a cylinder, (3) transferring said solution from the gravure surface of the cylinder to a substrate surface, and (4) evaporating the organic solvent from the solution transferred to the substrate surface so as to leave a film of the **electroconductive polymer** on the substrate surface. An addnl. aspect of the invention involves **detecting** the presence of a specific analyte in a sample using an assay format in which magnetic components, such as magnetic particles with antibodies on their surfaces, provide an analyte-binding solid phase and the signal is generated by a dopant that changes the conductivity of an **electroconductive polymer** coating on an electrode. A related aspect of the invention is the use of a magnetic device comprised of an array of magnetic pole-pieces of high relative permeability alternating with appropriately oriented magnetic structural elements to provide a focussed magnetic field that will attract the magnetic components used in an assay to the surface of a receptacle, such as an electroconductive cell. The invention is illustrated by analyzing atrazine and using cacodylate to generate a triiodide dopant from **hydrogen peroxide**.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 3 COMPENDEX COPYRIGHT 2006 EEI on STN
ACCESSION NUMBER: 1988(3):38805 COMPENDEX
DOCUMENT NUMBER: 880320818
TITLE: SEMICONDUCTIVE POLYMER FILM **SENSOR** FOR GLUCOSE.
AUTHOR: Malmros, M.K. (Ohmicron Corp, Pennington, NJ, USA); Glubinski, J.III; Gibbs, William B.Jr.
SOURCE: Biosensors v 3 n 2 1987 p 71-87
CODEN: BISSED ISSN: 0265-928X
PUBLICATION YEAR: 1987
DOCUMENT TYPE: Journal
TREATMENT CODE: Application; Experimental
LANGUAGE: English
AN 1988(3):38805 COMPENDEX DN 880320818

AB The electrical conductivity of organic **polymers** such as **polyacetylene** and its derivatives can be varied over twelve orders of magnitude with small amounts (0-3%) of various dopants, such as iodine, bromine, and perchloric acid.Semiconductive **polyacetylene** film doped with iodine is **sensitive** to **hydrogen peroxide**, and can be used as a quantitative **hydrogen peroxide sensor**.A rapid, quantitative **sensor** for glucose, using the flavorprotein glucose oxidase, is described and introduces a novel **electroactive** material, **polyacetylene** , as the basis for a new biosensor.A significant increase in the **sensitivity** of this device has been obtained by mediating the doping reaction through lactoperoxidase and potassium iodide.(Author abstract) 22 refs.